

REMARKS

Summary of the Office Action

In the Office Action, the drawings are objected to as allegedly failing to comply with 37 CFR 1.83(a).

Claims 8 and 10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,559,814 to Kanazawa et al. (hereinafter “Kanazawa”).

Claims 1 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanazawa in view of U.S. Patent No. 6,037,916 to Amemiya (hereinafter “Amemiya”).

Claims 2-7, 13, 15, 16 and 18 are allowed.

Claims 9, 12, 14, and 17, while objected to as being dependent upon a rejected base claims, would be allowable if rewritten in independent form.

Summary of the Response to the Office Action

Applicant has amended claims 1, 8 and 11 to improve the form of the claims and to differently describe embodiments of the invention. Applicant has canceled claim 10 without prejudice or disclaimer. Accordingly, claims 1-9 and 11-18 remain pending for consideration.

Objection to the Drawings

In the Office Action, the drawings are objected to as allegedly failing to comply with 37 CFR 1.83(a). With regard to the drawing objections, the Office Action alleges that “wherein on both sides of one of . . . and sustaining electrodes extend” recited in lines 9-14 of claim 1, or in lines 7-12 of claim 8, or lines 6-11 of claim 10 must be shown in the drawings or the feature(s) canceled from the claims. Claim 10 has been canceled without prejudice or disclaimer,

rendering the associated objection moot with regard to that claim. Moreover, in response to these drawing objections, Applicant has newly-amended each of claims 1, 8 and 11 herein. Applicant respectfully submits that the features recited in each of newly-amended claims 1, 8 and 11 are clearly shown in Figs. 3, 4, 10A, 10B, 12A and 12B of the instant application.

For example, Fig. 3 of the instant application illustrates a sustain electrode (103) arranged between two scanning electrodes (104a and 104b). Moreover, Figs. 10A, 10B, 12A and 12B also illustrate a sustain electrode arranged between two scanning electrodes (an odd-numbered scanning electrode and an even-numbered scanning electrode, for example). Even further, Fig. 4 illustrates an SCS structure, i.e., a plasma display panel having a plurality of row electrode sets, each of the sets including a pair of scanning electrodes (S1 and S2, S3 and S4, for example) and a sustain electrode (C1, C2) arranged therebetween, and the sustaining electrode is interposed between neighboring display cells (dotted squares) such that the sustain electrode is shared by these neighboring display cells.

Applicant respectfully submits that the specification of the instant application describes at page 15, lines 7 to 8, that the first embodiment has the SCS structure shown in Fig. 3. Moreover, at page 25, lines 24 to 28, the specification explains that embodiments of the present invention can be adopted to not only to the SCS structure but also to the CSC structure. Accordingly, Applicant respectfully submits that every feature of the instant application's claims, in their current form, is shown in the drawings. As a result, withdrawal of the objection to the drawings is respectfully requested.

Rejection under 35 U.S.C. § 102(e)

Claims 8 and 10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kanazawa. Claim 10 has been canceled without prejudice or disclaimer, rendering the rejection of this claim moot. To the extent that this rejection might still apply to independent claim 8 as newly-amended, it is respectfully traversed as follows.

The plasma display panel driving method of in claim 8 recites a feature that each field includes two types of sub-fields, i.e., a first type of sub-field that employs an interlace method, in which alternate lines are selected for light emission, and a second type of sub-field employing a progressive method, in which all lines are selected for light emission. Applicant respectfully submits that this feature simultaneously improves brightness, luminous efficiency, and vertical resolution as described at page 13, lines 2 to 6 of the instant application's specification.

On the contrary, Applicant respectfully submits that Kanazawa discloses a driving method in which each field includes only one type of sub-field, namely, one that employs the interlace method. In this regard, Kanazawa states at col. 7, lines 50 to 54, that "odd-numbered lines are displayed in the first through fourth sub-fields of the first field in accordance with the parity signal, and even-numbered lines are displayed in the first through fourth sub-field of the second field."

Accordingly, Kanazawa's disclosed method includes a feature that only the odd-numbered lines emit light while the even-numbered lines do not emit light in the first field. Similarly, only the even-numbered lines emit light while the odd-numbered lines do not emit light in the second field. This feature of Kanazawa's disclosed method described above is further illustrated in Fig. 11 of Kanazawa.

As a result, Applicant respectfully submits that Kanazawa clearly fails to disclose all of the features recited in claim 8 of the instant application, including, for example the “assigning one or more sub-fields … constituting one field” feature of the claim.

Accordingly, Applicant respectfully asserts that the rejection under 35 U.S.C. § 102(e) should be withdrawn because Kanazawa does not teach or suggest each feature of independent claim 8. As pointed out in MPEP § 2131, “[t]o anticipate a claim, the reference must teach every element of the claim.” Thus, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. Of California, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).”

Rejection under 35 U.S.C. § 103(a)

Claims 1 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanazawa in view of U.S. Patent No. 6,037,916 to Amemiya (hereinafter “Amemiya”). To the extent that these rejections might be deemed to apply to the claims as newly-amended, they are respectfully traversed as follows.

Claim 1 has been newly-amended to recite a method for driving a plasma display panel including a feature of “changing at least one condition selected from the group consisting of a voltage of a sustaining pulse, a pulse width of a sustaining pulse except for the first sustaining pulse, and a pulse applying interval of a sustaining pulse in relation to a polarity of said sustaining pulse,” the sustaining pulse being applied to the first electrode and second electrode alternately in every cycle by a predetermined number with relation to an image data during a sustaining period. Similar amendments have been made to claim 11,

which has also been amended so as to now be an independent claim.

Applicant respectfully submits that by employing this methodologies recited in claims 1 and 11, it is possible to improve the brightness and luminous efficiency for the interlace method and improve the vertical resolution for both interlace and progressive methods as described, for example, at page 12, line 13 to page 13, line 1 of the instant application's specification.

On the other hand, Applicant respectfully submits that Amemiya merely teaches a method in which only the width of a first sustaining pulse is changed from that of a second sustaining pulse. Applicant respectfully submits that the purpose of this methodology described in Amemiya is to obtain a smooth transitioning condition from a data write period to a sustain discharge period, as shown in col. 13, lines 10 to 36 of Amemiya.

Accordingly, Applicant respectfully submit that the subject matter of embodiments of the present invention, as recited in independent claims 1 and 11, as well as the associated object thereof, is quite different from any disclosure of Amemiya. Further, the instant application's specification includes a detailed technical discussion of specific features such as changing the width of the first sustaining pulse from that of the second sustaining pulse. See, for example, page 15, lines 17 to 18 of the instant application's specification. Such discussions are an indication that Applicant has well recognized subject matter such as that found in Amemiya as being known prior art. As a result, Applicant respectfully submit that the disclosure of Amemiya, like that of the primary reference to Kanazawa, as discussed above, is particularly different from the subject matter recited in independent claims 1 and 11.

As a result, Applicant respectfully asserts that the rejections under 35 U.S.C. § 103(a) should be withdrawn because neither Kanazawa nor Amemiya, whether taken singly or

combined, teach or suggest each feature of independent claims 1 and 11. MPEP § 2143.03 instructs that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 409 F.2d 981, 180 USPQ 580 (CCPA 1974)." Furthermore, Applicant respectfully asserts that dependent claim 12 is allowable at least because of its dependence from claim 11 and the reasons set forth above.

The Examiner is thanked for the indication that claims 2-7, 13, 15, 16 and 18 are allowed.

The Examiner is also thanked for the indication that claims 9, 12, 14, and 17, while objected to as being dependent upon a rejected base claims, would be allowable if rewritten in independent form. It appears in this regard that the Office Action is mistaken with regard to dependent claim 14 because it is dependent on claim 2, which is allowed. Accordingly, it appears that claim 14 is also allowed. If Applicant's understanding is incorrect, clarification is requested in the next Office Communication. Moreover, claims 9, 12 and 17 are in condition for allowance at least because of their dependence from claims 8 and 11, and the reasons set forth above. Accordingly, withdrawal of the objection of these claims is respectfully requested.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests the timely allowance of this application. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required,

including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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